AN EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF TEAM BASED LEARNING (TBL) VERSUS LECTURE METHOD ON THE LEVEL OF ENGAGEMENT AND LEARNING PREFERENCE ON THE COMMUNITY HEALTH NURSINGSUBJECT AMONG UNDERGRADUATE STUDENTS OF SELECTED NURSING COLLEGES, WEST BENGAL

A Synopsis

Submitted For the award of

DOCTOR OF PHILOSOPHY

in

Nursing

Submitted to

Sri Balaji Vidyapeeth

(Deemed to be University)

by

Elavarasi.R

(UID:1805002045)

Under the guidance of

Dr.Renuka.K

Guide/Convener

Sri Balaji Vidyapeeth, Puducherry

September 2023

An Experimental Study to Evaluate the Effectiveness of Team Based Learning (TBL) Versus Lecture Method on the Level of Engagement and Learning Preference on the Community Health Nursing Subject among Undergraduate Students of Selected Nursing Colleges, West Bengal

Dr.Renuka.K

Guide/Convener
Sri Balaji Vidyapeeth, Puducherry

Dr.M. Shivasakthy
Co-Guide
Director, Institution of Health Professions Education
Professor, Prosthodontics,
Indira Gandhi Institute of Dental Sciences
Sri Balaji Vidyapeeth, Puducherry

Dr.S.Sridevy
Associate Professor
Mother Theresa Post Graduate and Research Institute of Health Sciences,
Puducherry

Dr.KaralineKarunagari
Principal,
Kamarajar College Of Nursing,
Keerapalayam
Cuddalore District
Tamil Nadu

Prof.Mrs.Bamalakshmi J
RAC Member
Head, Dept.of Community Health Nursing,
Kasturba Gandhi Nursing College,SBV
Puducherry

TABLE OF CONTENTS

S.No.	Topic	Page No.
1.	INTRODUCTION	1
2.	REVIEW OF LITERATURE	5
3.	RESEARCH METHODOLOGY	10
4.	ANALYSIS AND INTERPRETATION	19
5.	DISCUSSION	25
6.	SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION	30
	REFERENCES	32
	APPENDIX	35

CHAPTER-I

INTRODUCTION

1.1 Background of the study

Team-based learning (TBL) is an instructional strategy developed by Dr Michaelsen during 1990s in the business school environment who wanted the benefits of small group learning within large classes. In 2001, a US federal granting agency awarded funds for educators in the health sciences to learn about and implement the strategy in their educational programs; TBL was put forward as one such strategy and

as a result it is used in over 60 US and international health science professional schools. TBL is very different from problem-based learning (PBL) and other small group approaches. TBL does not require multiple faculty or rooms, but students must come prepared to sessions, and individual and small groups of students (teams) are highly accountable for their contributions to team productivity.[1]

Team-based learning (TBL) in medical education has emerged over the past few years as an instructional strategy to enhance active learning and critical thinking – even in large, basic science courses. Although TBL consistently improves academic outcomes by shifting the instructional focus from knowledge transmission to knowledge application, it also addresses several professional competencies that cannot be achieved or evaluated through lecture-based instruction.[2]

A sense of urgency exists among nurse educators to determine the best possible teaching strategies to create a rich, engaging learning environment for students. With the calls for transformation, innovation, and excellence in nursing education from the American Association of Colleges of Nursing, the National Council of State Boards of Nursing, and the National League for Nursing, educators may determine that current teaching strategies fall short. Team-based learning, an innovative teaching strategy, offers educators a structured, student-centred learning environment and may be effective in teaching necessary skills to students such as critical thinking, professionalism, communication, and inter-professional teamwork.[5]

Research on **lecturing** suggests that traditional lectures, if well planned and presented, are as effective as other methods (but not more effective) for conveying information **(Brown & Atkins, 1988)**. However, there is little point in simply conveying information, however well it is presented, without stimulating students' motivation to learn and giving them opportunities to develop understanding. Lectures can be used to give broad contextual information, to highlight the important or interesting aspects of a topic, to demonstrate problem solving techniques, or to show the relative strengths of two sides of an academic controversy.

1.2 Need for the study:

Rapid changes in the nursing field and high demand for practicing nurses put pressure on nursing faculty to educate increasing numbers of nursing students, often

without corresponding increases in resources. Although the use of active and cooperative instruction methods in the classroom has been associated with improved student learning, these practices require increased effort on the part of both faculty and students.[4]

Generally, students are satisfied with TBL and student engagement is higher in TBL classes. Evidence also exists that students in TBL classes **score higher on examinations**. However, further high-quality Group-Istudies are needed to confirm that TBL positively affects examination scores and other **learning outcomes** and to determine whether TBL produces students who have the ability to **function well in groups**.[3]

As facilitators of nursing education, teachers have to ensure that learners are processing the new knowledge and in what way teachers can facilitate their learning.Further teachers have to assess the factors which enhancing and influencing student's engagement in learning process. To meet this need present study is going to try with Team Based Learning strategy, toteach the content in community health nursing subject, The Population explosion and its control (Family Planning).

1.3 Statement Of Problem

An Group-Istudy to evaluate the effectiveness of Team Based Learning (TBL) versus lecture method on the level of engagement and learning preference on the Community Health Nursing subject among UG students of selected Nursing Colleges, West Bengal.

1.4 Aim of the study:

The aim of the study is to evaluate the effectiveness of Team Based Learning (TBL) versus lecture method on the level of engagement and learning preference on the Community Health Nursing subject among UG students of selected Nursing Colleges, West Bengal.

1.5 Objectives of the study:

1. To assess the level of Knowledge on community health nursing subjects among undergraduate Nursing students in Group-I and Group-II before and after intervention.

2. To assess the level of engagement and learning preference between TBL versus Lecture method in community health nursing subject of Group-I and Group-II.
3. To evaluate the effectiveness of TBL on the level of engagement, and learning preference in community Health Nursing subject among the students of Group-I.
4. To evaluate the effectiveness of Lecture method on the level of engagement, and learning preference in community Health Nursing subject among the students of Group-II.
5. To compare the effect team based learning Vs Lecture method on level of engagement and learning preference of students in Group-I and Group-II.
6. To find out the relationship between the level of engagement and learning preference in community health nursing subject of Group-I and Group-II.
7. To associate the pre-interventional level of engagement and learning preference of students with their selected demographic variables.

Operational Definitions:

1. **Team-based learning (TBL):** In this study Team based learning is an active small grouplearning activity by dividing the whole class students into small groups and each group will consists of 5 to 7 undergraduate Nursing students
2. **Lecture method:** In this study lecture method is an oral presentation of selected community health nursing topics to the whole class with the help of audio visual aids such as power point presentation, black board etc.,
3. **Level of engagement:** It refers to the degree of attention, curiosity, optimism and passion that undergraduate nursing students show towards team based learning and lecture method of teaching in learning process.
4. **Learning Preference**: In this study learning preference refers to the level of interest or motivation shown towards the team based learning and lecture method by the undergraduate nursing students.
5. **Community health nursing subject:** In this study community health nursing suject refers to selected topics such as women empowerment and methods of

family planning population explosion and its control etc. Which are the parts of curriculum under community health nursing-I for B.Sc nursing second year undergraduate students prescribed by Indian Nursing Council.

6. **Under Graduate Students:** In this study undergraduate students refers to the students who were studying B.Sc Nursing II year in selected nursing colleges, West Bengal.

Hypotheses:

H1: Level of engagement and learning preference differ before and after administration of Team based learning in community health nursing subject among students in Group-I and Group-II.

H2: Level of engagement and learning preference differ before and after administration of lecture method of learning in community health nursing subject among students in Group-I and Group-II.

H3: Relationship exit between level of engagement and learning preference of students undergone team based learning and lecture method of learning.

H4: Significant association between pre-interventional level of engagement and learning preference of student undergone Team based learning and lecture method of learning with their selected demographic variables.

Delimitation:

The study was delimited to students studying B.Sc Nursing II year in selected Nursing college, West Bengal.

CHAPTER-II

REVIEW OF LITERATURE

The literature reviewed for the present study has been organized under the following headings:-

1. Team Based Learning in Nursing

2. Team Based Learning in other discipline
3. Lecture method in Nursing
4. Lecture method in other discipline

Section-I: Review related to Team Based Learning in Nursing

Branneyet al. (2018) conducted a mixed method observational studyto evaluate the use of team-based learning in the teaching of applied pathophysiology to undergraduate student nurses. Applied pathophysiology module circulatory shock was taught using Team-based Learning while all remaining topics were taught using traditional lectures. After the Team-based Learning intervention, the students were invited to complete the Team-based Learning Student Assessment Instrument, which measures accountability, preference and satisfaction with Team-based Learning. The exam scores on the question related to Team-based Learning-taught material were comparable to those related to lecture-taught material.[11]

Faezi, seyedehtahereh, et al (2018) conducted a study to evaluate the effects of implementing Team-Based Learning (TBL) on student engagement, accountability, satisfaction, and preference for lecture or team-based learning. They assessed the effect of TBL on knowledge retention and application over time through short answer questions based on clinical scenarios addressing history taking and diagnosis skills in medical students.Theyadoptedquasi-Group-Idesign. And finally theycompared TBL with the conventional lecture-based method. The assessments were performed after implementation of TBL by the Classroom Engagement Survey (CES) and Team-Based Learning Student Assessment Instrument (TBL-SAI). The results revealed that higher student engagement, satisfaction and long term learning by TBL.[6]

Section-II: Review related to Team Based Learning in other discipline

Sharma, Anita, et al.(2017) examined the early effects of a team based learning (TBL) pilot, including differences in student engagement with TBL compared to lectures, and student accountability, preferences, and satisfaction with TBL.Three TBL sessions were delivered in the nephrology section of pharmacotherapy and then students completed the team-based learning student assessment instrument (TBL-SAI), which assesses TBL relative to lecture on three subscales (i.e., student accountability, preferences, and satisfaction). Students also

completed a modified engagement instrument for a lecture and again for a TBL session.TBL had positive effects on engagement and accountability. Early positive effects could aid programs in building and maintaining momentum with the TBL approach while working towards outcomes that may take longer to achieve, such as changes in professionalism or teamwork.[7]

Vijayalakshmi , et al.(2016) done a study to explore the perception and performance about TBL in teaching Anatomy.This study involved a group of seventy first year MBBS students of RAK Medical and Health Sciences University, Ras Al Khaimah UAE. TBL was conducted in a topic of Anatomy as per the standard protocol that includes pre class study, readiness assurance followed by application of course content by small group discussion. Perception of TBL was determined by administering the eight items questionnaire and performance was analysed by their scores in individual and group readiness assurance test and in course assessment scores. And the result revealed that about 68.5% of students were able to learn and understand the topic effectively through TBL method. 73% students felt, interaction among the groupmembers helped them to understand the course content better. About 62% were of the opinion that the lectures should be replaced with more and more TBL sessions in their teaching methodology.

Section III: Review related to Lecture Method in Nursing:

Noel MD, Daniels FM, Martins P (2015) highlighted the increased disadvantages of the lecture teaching strategy. It is creating an absurd future particularly in community nursing education. Students keep on communicating using cell phone and other devices to one another while the lecturer is busy teaching. However, use of lecture method is working better when combined with other interactive teaching strategies like discussion, questions and answer. There is need to start transitioning away from the teacher centred teaching to interactive teaching and learning process.[13]

Sand Jecklin (2007)in her found that nursing students tend to prefer passive learning strategies, such as lectures and they perceive lectures to be an effective teaching method.[4]

Section-IV: Review related to Lecture Method in other Discipline:

Cynthia J Miller, et al (2013) conducted a study to compare traditional and engaging lecture methods in a large, professional-level coursestudents. They were taught five physiological systems using traditional lecture methods and six physiological systems using engaging lecture methods. The use of engaging lectures led to a statistically significant higher average on unit exams compared with traditional didactic lectures (8.6% higher, $P < 0.05$). Furthermore, students demonstrated an improved long-term retention of information via higher scores on the comprehensive final exam (22.9% higher in engaging lecture sections, $P < 0.05$). Many qualitative improvements were also indicated via student surveys and evaluations, including an increased perceived effectiveness of lectures, decrease in distractions during lecture, and increased confidence with the material[15].

Matheson, C. (2008) examined the merits and demerits of lecture method and reported that lectures have been criticized for being outmoded, ineffective and inefficient. If lectures are compact and well-structured, a lot of knowledge can be transmitted to a lot of students.When students are fully engaged their attention span seems infinite in a small group discussion, a tutor can be authoritarian and oppressiveLectures can not only transmit knowledge, but also stimulate higher-order thinkingLearning should be closely related to understanding and solving real-life problems.

Development of Nursing Evidence-Based Practice Protocol

For the development of evidence based practice guideline, an extensive systematic review was carried out by the researcher. The electronic databases and various hand search strategies were adopted for the systematic review. The search engines included were Pub med Central, Google Scholar, Science Direct, Cochrane 38 Library and Proquest.

The Protocol includes the following aspects in this study:

1. Nursing Evidence Based Practice Question Development
2. PRISMA Flow Diagram
3. Characteristics of included papers (Study design wise and Intervention wise)
4. Individual Evidence Summary

Conceptual Framework for the Study:

The study is based on **Imogene King's Goal Attainment theory(1997)** which is most relevant to the present study to assess the effectiveness of Team Based Learning and Lecture Method for improving the students' level of engagement and learning preference among B.Sc Nursing students studying in selected Nursing Colleges, West Bengal. The researcher prepared, modified conceptual framework based on Imogene King's Goal Attainment Theory.

Perception:

Perception is a process by which people translates sensory impression into coherent and unified manner to view the world around them. In this study the researcher perceived that students needs some new methodology of teaching to improve their engagement in classroom activities, communication skills, team work and, their learning preference.

Judgement:

The ability to judge and make a decision or form an opinion objectively, authoritatively and wisely, especially in matters affecting action. In this study the researcher judges the need for certain measures to improve the level of engagement in classroom activities and learning preference among samples.

Action:

Each member of the group makes a judgement and thereby action follows to attain the goal. In this study the researcher identifies two methods of teaching ie, Team Based Learning and Lecture Method.

Mutual Goal Setting:

It is a process that leads to goal attainment. It is a dynamic process by which goal directed choice of perceived alternatives is made acted upon by the individuals or groups to answer a question and attain a goal.In this study the researcher and the samples understand their goal and action mutually. The main goal of this study is to improve the level of engagement in class room activities and to assess the learning preference among samples.

Reaction:

Reaction is the individual plan together and moves towards goal attainment. In this study the researcher gets the concern from the samples who were willing to assess their level of engagement and learning preference.

Intervention: It is the action of two or more persons in mutual presents a sequence of verbal behaviours that are goal directed. In this study the researcher administers the 2 planned measures i.e., teaching the same topics of community health nursing subject by using Team Based Learning and Lecture method of teaching in two different groups of same course and year.

Transaction: It is the process of interaction in which human beings communicate with the environment to achieve goal that are valued towards goal directed human behaviours. In this study the researcher assess the effectiveness of teaching methods by measuring the level of engagement and learning preference of students belongs to both groups

Attainment: In this study the researcher's goal is to improve the level of engagement and learning preference of the students , if the goal is attained then the academic outcome will be improved and if the goal is not attained then the reassessment is done, but the reassessment is not included in this study.

CHAPTER-III

RESEARCH METHODOLOGY

Research Approach

The aim of this study was to determine the effectiveness of Team Based Learning Versus Lecture method among the Undergraduate nursing students. Hence to accomplish the objectives of this study Group-Iapproach were used.

Research Design

A quasi Group-Itwo group pre-test, post-test research design was adopted for conducting this study.

	Group	**Pre test**	**Intervention**	**Post Test**
Random Allocation of setting	Group I Experimental	**Pre-test assessment (IRAT-Individual Readiness assurance Test)** (O1)	Team Based Learning ($X_{1)}$	**Post-test assessment (TRAT-Team Readiness Assurance Test)** (O2)
	Group II Control	**Pre-test assessment** (O1)	Lecture method ($X_{2)}$	**Post- test Assessment** (O2)

O1 – Pre test assessment of knowledge, level of engagement and learning preference.

O2 – Post test assessment of knowledge, level of engagement and learning preference.

X_{1}– Community Health nursing subject topic was taught to the Group-I by Team Based Learning Method.

X2- Community Health nursing subject topic was taught to the Group-II by routine Lecture method of teaching.

SETTING OF THE STUDY:

This study was conducted in Mrinalini Devi College of nursing and Royal college of Nursing, PaschimBardhamann District from the state of West Bengal.

TARGET POPULATION:

Based on purpose, the target population was chosen. Students those who were studying B.Sc Nursing II year in selected Nursing colleges.

ACCESSIBLE POPULATION:

Based on random method the accessible population were chosen and they were the students studying B.Sc nursing II Year in Mrinalini Devi College of nursing and Royal college of Nursing at the time of data collection.

SAMPLES:

The samples of the study were 200 students, studying B.Sc Nursing who fulfilled the inclusion criteria.

Sample Size:

A total of 200 students, from 2 colleges were selected and randomly allocated each college in Group-I and Group-II.

Sample Size Estimation:

The sample size was estimated based on previous study results and by Power Analysis with 95% of confidence and 80% of power of the study.

The formula used for calculating the sample size was

$$\frac{P1Q1+P2Q2 \quad (Z\alpha+Z\beta)\ 2}{(P1-P2)2}$$

$Z\alpha$ 1.96 (95% confidence)

$Z\beta$ 0.84 (80% power of the test)

P1 (Previous study findings) 77.5%

P2 (Expected level of improvement) 93.2%

Q1 (1 – P1) 22.5%

Q2 (1 – P2) 6.8%

The estimated sample size for the study = 76

10% of attrition is expected.

The finally arrived sample size will be = 76+8 = 84

The final sample size will be 84 or it can be rounded to 90.

Each Group will 90 (Totally 180)

SAMPLE SELECTION CRITERIA:

Inclusion criteria:

- All the B.Sc (N) II year students awaiting to undergo CHN-I

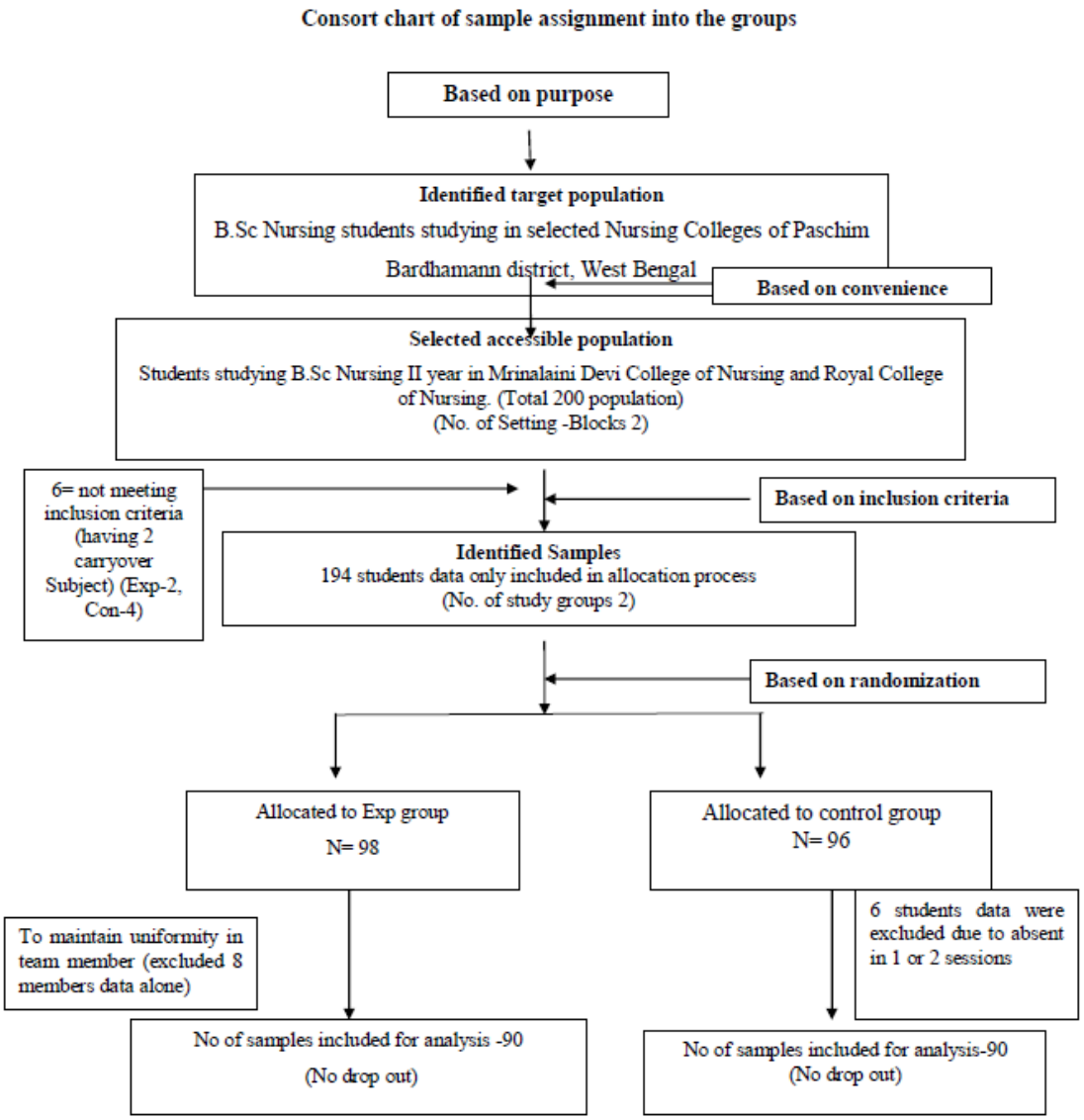
Exclusion Criteria:

- Those 2nd year students who have 2and more carry over subjects.
- Those who are not willing to participate
- Students absent on the day of data collection

SAMPLING TECHNIQUE

Total enumerative purposive sampling technique was used to select the study population.

Consort chart of sample assignment into the groups


Consort chart of sample assignment into the groups
Based on purpose
Identified target population
B.Sc Nursing students studying in selected Nursing Colleges of Paschim Bardhamann district, West Bengal
Based on convenience
Selected accessible population
Students studying B.Sc Nursing II year in Mrinalaini Devi College of Nursing and Royal College of Nursing. (Total 200 population)
(No. of Setting -Blocks 2)
6= not meeting inclusion criteria (having 2 carryover Subject) (Exp-2, Con-4)
Based on inclusion criteria
Identified Samples
194 students data only included in allocation process
(No. of study groups 2)
Based on randomization
Allocated to Exp group
N= 98
Allocated to control group
N= 96
To maintain uniformity in team member (excluded 8 members data alone)
6 students data were excluded due to absent in 1 or 2 sessions
No of samples included for analysis -90
(No drop out)
No of samples included for analysis-90
(No drop out)

DEVELOPMENT OF TOOLS AND TECHNIQUES:

The following steps were adopted for the selection and finalization of the tool for the data collection such as review of literature, discussion with experts, content validity, pretesting of the instruments and reliability testing of the instruments.

DESCRIPTION OF TOOLS AND TECHNIQUES:

The tools used for this study included 3 sections as follows.

PART -1: Socio-demographic variables: The socio demographic proforma was developed by the researcher to collect the background information of subjects. The items were age, gender, marital status, religion, area of residence, previous academic achievements.,

Part-II: Structured Questionnaire to assess the Level of Knowledge among the

Group-Iand Group-II;

It comprises of 10 MCQ/session, total 80 MCQ questions with four options which include one correct answer and every correct answer was assigned the score of 1 and wrong answers a score of 0. The total score of structured questionnaire was 80. The knowledge score was classified in to 3levels.

Scoring Key: Each correct answer will be awarded one mark and wrong answer will be given 0 score

76-100= Adequate Knowledge

51-75= moderately adequate Knowledge

<50= Inadequate Knowledge

Part-III: Rating scale was prepared by the researcher to assess the level of engagement among the Group-Iand Group-II; It is consisted of 20 items and it was categorized under 5 domains such as academic challenges, active & collaborative learning, student –staff interaction, enriching educational experiences, supportive learning Environment. Responses extended from always-3, often-2, sometimes-1, never-0. Then the total score was obtained and it was converted into percentage as follows;

Scoring Interpretation:

81-100= Highly engaged

61-80= Adequately engaged

41-60= Moderately engaged

21-40= Inadequately engaged

0-20= Less engaged

Part IV: Preference checklist was prepared by the researcher to assess the learning preference among the Group-Iand Group-II;

Scoring Interpretation:

90-100 Highly preferring

70-80 Adequately preferring

50-60 Moderately preferring

30-40 Inadequately preferring

10-20 Less preferring

Pilot Study

Pilot study was conducted in PN Das College of Nursing as Group-I and Kalpana Institute of Nursing to find out the reliability and feasibility of data collection method for the period of 4 months from April 2021-July 2021. Eight sessions were completed by 2 months per group. Based on the findings of pilot study it is confirmed no changes were needed in main study as the tools were appropriate and feasible to use.

Intervention Protocol:

Students/Subjects will be selected based on the inclusion and exclusion criteria. All subjects who meet the criteria will form the sampling frame from which sample will be selected.

1. **Pre-test assessment (both Group-Iand Group-II)**

   Demographic details of the study subjects

2. **Intervention:**

Group-I: Team Based Learning Process

PREPARATION
Independent study on Population Explosion and its control from the learning material developed by the researcher
READINESS ASSURANCE PROCESS
APPLICATION ORIENTED ACTIVITIES

- **Preparation Phase:** Researcher hands over the pre-made learning material to the subjects on the first topic from the unit on Population explosion and its control, with the instruction to do the self reading and come prepared to take up Individual test.

- **Readiness Assurance Process(45-70 min):** which includes individual test, team test, Appeals from teams, instructor feedback on complex/ unclear doubts

  Step 1: Individual test(Individual Readiness Assurance Test) - multiple choice questions on Community Health Nursing subject.

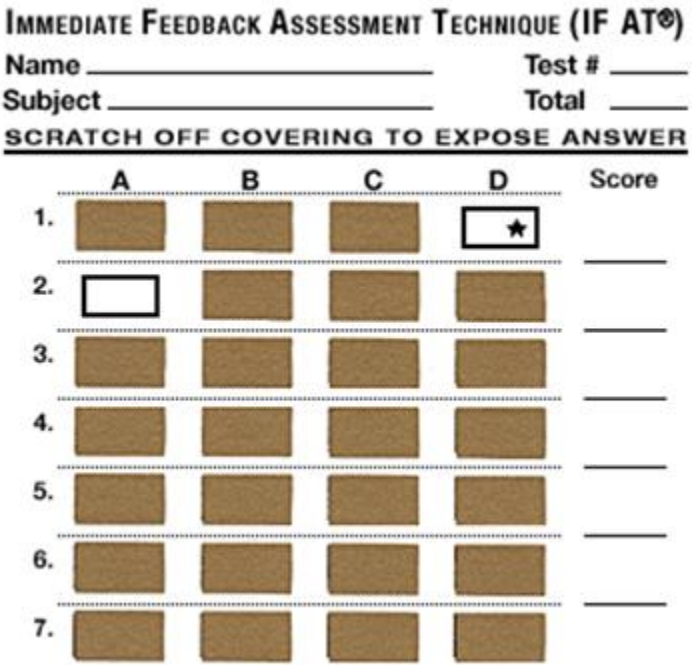
  Step 2: Team test(Group Readiness Assurance Test)- After individual test, immediately proceed to re-take the same test on the same content, but this time as group using **Immediate Feedback Assessment Technique IFAT.**

  Step3: Appeals- students are allowed and encouraged to appeal any process that were missed by the group on the group test.

  Step 4: Instructor feedback: after the students have submitted their appeals, the teacher can comment in the form of discussion that the groups seemed to be unclear about.

- **Application Oriented Activities:**At the end,teacher need to remind students of what they have learned about: concept about Population explosion-its causes and effects, application of the value of team interactions in intellectual

challenges, kinds of interaction that promotes effective teamwork. This same steps will continued for remaining 7 sessions.



Group-II:

Structured content on which was given to the Group-I will be delivered by lecturing. (Pre-test and posttest on restricting to content taught will be administered after every session).

ETHICAL CONSIDERATIONS:

a) Institute Ethical committee clearance was from the Institutional Ethics committee of IQ City Medical College and Hospital, Durgapur, West Bengal.

b) Written informed consent was taken from the study subjects.

c) The subjects involved in the study were explained clearly about the purpose and objectives of the same.

d) The subjects selected for the study was assured of the confidentiality of the information provided to the researcher.

e) It was ensured that a prescribed intervention will not affect the normal work schedule of the subjects as it is included in their curriculum.

f) TBL teaching sessions (one session) was given to the Group-II after the completion of the study.

DATA ANALYSES & STATISTICAL APPLICATION:

Statistics used for data analysis

.**Descriptive statistics**	**Used to interpret**
Tables and figures	Baseline characters and major findings of the study
Frequency & Percentage distribution	Demographic data, knowledge distribution, level of engagement and Learning preference
Inferential statistics	**Used to interpret**
Chi square test	Comparison of pre-interventional and Post-interventional level of engagement and learning preference.
One way ANOVA/Unpaired 't' test	Association between distribution of baseline characters with level of Knowledge, level of engagement and learning preference.
Karl Pearson's Correlation	Correlation between post intervention level of engagement, learning preference and level of knowledge

CHAPTER-IV

ANALYSIS AND INTERPRETATION

Data was entered and analyzed using SPSS-20 Package. Appropriate statistical methods were used based on the objectives of the study. Descriptive statistics used were frequency, percentage, Mean and standard deviation. The continuous variables were interpreted by appropriate parametric test and the discrete variables were interpreted by appropriate non-parametric test.

Comparison of pre and post interventional level of modules of knowledge upon community health nursing subjects among B.Sc. Nursing Students between the Group-Iand Group-II.

n = 180(90+90)

Test	**Overall Knowledge**	**Group-I-I**		**Control Group-II**		**Chi-Square Test Value**
		F	**%**	**F**	**%**	
Pretest	Inadequate (≤50%)	89	98.9	90	100.0	χ^2=1.006 p=0.316 N.S
	Moderately Adequate (51 – 75%)	1	1.1	0	0	
	Adequate (>75%)	-	-	-	-	
Post Test	Inadequate (≤50%)	0	0	60	66.7	**χ^2=169.09 p=0.0001 S*** **
	Moderately Adequate (51 – 75%)	3	3.3	30	33.3	
	Adequate (>75%)	87	96.7	0	0	

***p<0.001, S – Significant, N.S – Not Significant

The above table shows that shows the comparison of pre and post interventional level of knowledge upon community health nursing subjects among B.Sc. Nursing Students between the Group-Iand Group-II. In the pretest, the 89(98.9%) in the Group-I and 90(100%) in the Group-II had inadequate knowledge. The chi-square test cannot be computed which clearly infers that there was no difference in the level of knowledge between the two groups.

In the post test, the 87(96.7%) in the Group-I had adequate knowledge and 3(3.3%) had moderately adequate knowledge whereas in the Group-II, 60 students (66.7%) had inadequate knowledge and 30 students (33.3%) had moderately adequate knowledge. The calculated chi-square value of 169.09 was found to be statistically significant at $p<0.001$ level which clearly infers that there was statistically significant difference in the level of knowledge between the two groups.

Comparison of pre and post interventional level of engagement upon community health nursing subjects among B.Sc. Nursing Students between the Group-Iand Group-II.

n = 180(90+90)

Test	**Level of Engagement**	**Group-I**		**Control Group**		**Chi-Square Test Value**
		F	**%**	**F**	**%**	
Pretest	Less engaged (0 – 20)	-	-	-	-	-
	Inadequately engaged (21 – 40)	90	100.0	90	100.0	
	Moderately engaged (41 – 60)	-	-	-	-	
	Adequate engaged (61 – 80)	-	-	-	-	
	Highly engaged (81 – 100)	-	-	-	-	
Post Test	Less engaged (0 – 20)	-	-	-	-	**χ^2=180.0 p=0.0001 S*** **
	Inadequately engaged (21 – 40)	-	-	90	100.0	
	Moderately engaged (41 – 60)	-	-	-	-	
	Adequate engaged (61 – 80)	4	4.44	-	-	
	Highly engaged (81 – 100)	86	95.56	-		

***p<0.001, S – Significant, N.S – Not Significant

The above table shows the comparison of pre and post interventional level of engagement upon community health nursing subjects among B.Sc. Nursing Students between the Group-Iand Group-II.

In the pretest, the 86(100%) in the Group-I and Group-II were less engaged. The chi-square test cannot be computed which clearly infers that there was no difference in the level of engagement between the two groups.

In the post test, the 86(95.56%) in the Group-I were highly engaged and 4(4.44%) in the Group-II were highly engaged and 90(100%) in the Group-II were inadequately engaged. The calculated chi-square value of 180.0 was found to be statistically significant at p<0.001 level which clearly infers that there was statistically significant difference in the level of engagement between the two groups.

Table 27: Comparison of pre and post interventional level of preference upon community health nursing subjects among B.Sc. Nursing Students between the Group-Iand Group-II.

n = 180(90+90)

Test	**Level of Preference**	**Group-I**		**Control Group**		**Chi-Square Test Value**
		F	**%**	**F**	**%**	
Pretest	Less preferring (1 – 2)	78	86.7	78	86.7	χ^2=0.000 p=1.000 N.S
	Inadequate preferring (3 – 4)	12	13.3	12	13.3	
	Moderately preferring (5 – 6)	-	-	-	-	
	Adequately preferring (7 – 8)	-	-	-	-	
	Highly preferring (9 – 10)	-	-	-	-	
Post Test	Less preferring (1 – 2)	0	0	73	81.1	**χ^2=180.0 p=0.0001 S*** **
	Inadequate preferring (3 – 4)	0	0	17	18.9	
	Moderately preferring (5 – 6)	-	-	-	-	
	Adequately preferring (7 – 8)	1	1.1	-	-	
	Highly preferring (9 – 10)	86	98.9	-		

***p<0.001, S – Significant, N.S – Not Significant

The above table shows the comparison of pre and post interventional level of preference upon community health nursing subjects among B.Sc. Nursing Students between the Group-Iand Group-II.

In the pretest, the 78(86.67%) in the Group-I and 78(86.7%) in the Group-II were less preferred and 12(13.33%) in the Group-I and 12(13.3%) in the Group-II were inadequate preferring. The calculated chi-square value of 0.000 was not found to be statistically significant which clearly infers that there was no difference in the level of learning preference between the two groups.

In the post test, the 86(98.9%) in the Group-I were highly preferring and 1(1.1%) in the Group-II were adequately preferring and 73(81.1%) in the Group-II were less preferring and 17(18.9%) were inadequate preferring. The calculated chi-square value of 180.0 was found to be statistically significant at $p<0.001$ level which clearly infers that there was statistically significant difference in the level of learning preference between the two groups.

Correlation between post-intervention levels of engagement, learning preference and Knowledge upon community health nursing subjects among B.Sc. Nursing students in Group-I.

n = 90

Variables	**Group-I**		**Karl Pearson's Correlation 'r' value**
	Mean	**S.D**	
Knowledge	76.72	4.04	**r = 0.379 p=0.0001 S*** **
Engagement	57.16	4.35	
Knowledge	76.72	4.04	**r = 0.394 p=0.0001 S*** **
Learning Preference	9.92	0.37	
Engagement	57.16	4.35	**r = 0.401 p=0.0001 S*** **
Learning Preference	9.92	0.37	

***p<0.001, S – Significant

The above table shows the correlation between post-intervention levels of engagement, learning preference and Knowledge upon community health nursing subjects among B.Sc. Nursing students in Group-I.

The table shows that the post mean score of knowledge was (76.72±4.04), engagement (57.16±4.35) and preference (9.92±0.37).

The calculated Karl Pearson's Correlation value of "r" between knowledge and engagement **(0.379)**, knowledge and Learning preference **(0.394)** and engagement and learning preference **(0.401)** shows positive correlation which was found to be statistically significant at $p<0.001$ level. This clearly infers that Team Based Learning imparted to the B.Sc Nursing Students in the Group-I was found to be effective in enhancing their level of engagement and choice of preference which ultimately increases their level of knowledge upon community health nursing subjects.

Table 30: Correlation between post-intervention levels of engagement, learning preference and Knowledge upon community health nursing subjects among B.Sc. Nursing students in Group-II.

n = 90

Variables	**Group-II**		**Karl Pearson's Correlation 'r' value**
	Mean	**S.D**	
Knowledge	39.18	3.79	r = -0.056 p=0.597 N.S
Engagement	21.54	1.27	
Knowledge	39.18	3.79	r = -0.046 p=0.670 N.S
Learning Preference	1.36	1.18	
Engagement	21.54	1.27	r = 0.097 p=0.363 N.S
Learning Preference	1.36	1.18	

N.S – Not Significant

The above table shows the correlation between post-intervention levels of engagement, learning preference and Knowledge upon community health nursing subjects among B.Sc. Nursing students in Group-II.

The table shows that the post mean score of knowledge was (39.18±3.79), engagement (21.54±1.27) and preference (1.36±1.18).

The calculated Karl Pearson's Correlation value of "r" between knowledge and engagement (-0.056), knowledge and Learning preference (-0.046) and engagement and learning preference (0.097) shows negative and positive correlation which was found to be statistically significant at $p<0.05$ level.

The result findings shows that there is no association exist between demographic variables of students in both Group-Iand Group-II with their pre-intervention levels of knowledge, engagement and learning preference upon community health nursing subjects among B.Sc. Nursing students.

CHAPTER-V

DISCUSSION

This chapter presents the discussion of the obtained results based on the stated objectives and hypothesis of the study.

While evaluating the pre-test level of knowledge in the Group-II, result revealed that 90(100%) had inadequate knowledge. And the post-test level of knowledge revealed that 60(66.67%) had inadequate knowledge and 30(33.33%) had moderately adequate knowledge, this finding was supported by the research findings;

Jafari Z (2013) conducted a study to compare the levels of student learning and teaching satisfaction for a neurology course between conventional lecture and TBL. Results revealed more success and student satisfaction was observed from team based learning compared to conventional lectures in teaching neurology to undergraduate students.

The second objective of the study is to assess the level of engagement and learning preference between TBL versus Lecture method in community health nursing subject upon Group-Iand Group-II.

In the present study result shows that during the pre-test, 90(100%) were inadequately engaged and in the post test after attending the Team Based Learning 86(95.56%) were highly engaged and 4(4.44%) were adequate engaged upon community health nursing subject among undergraduate Nursing Students in the Group-I where as in the Group-II 90(100%) in both pre-test and post-test students were inadequately engaged upon community health nursing subject.

The findings of the present study was supported by the research findings of **SanadA.etal (2022)** conducted a study with quasi Group-Iresearch design to assess the effect of TBL on class room engagement, critical dispositions and academic achievements of nursing students. The study findings indicate that the highest percentage of undergraduate nursing students felt engaged during class room and had a positive level of critical thinking dispositions skills. The mean score of achievement

of nursing students in the final theoretical exam in the units that was taught by TBL was higher than their achievement in the other units taught by traditional lecture method with a highly statistically significant difference.

Third objective in the present study is to evaluate the effectiveness of TBL on the level of engagement, and learning preference in community Health Nursing subject among the students of Group-I.

The present study result shows that in the pretest 90(100%) students were inadequately engaged and in the post test after the Team Based Learning 86 students (95.6%) were highly engaged and 4 students (4.4%) were adequate engaged upon community health nursing subjects among undergraduate nursing students in the Group-I. And the calculated chi-square test value of (180.0) was found to be statistically significant at $p<0.001$ level which infers that there was significant difference between the pretest and posttest level of engagement among the undergraduate Nursing students in the Group-I.

The above findings was supported by previous research done by **Mehaboob Y etal (2020),** the study result states that most of the students had a **preference** and reported higher accountability and satisfaction with Team based learning and through contextualization and team work, Team based learning appears to be a strategy that confers strong pedagogical benefits for nursing students.

Fourth objective of this study is to evaluate the effectiveness of lecture method on the level of knowledge, engagement, and learning preference in community Health Nursing subject among the students of Group-II.

In the present study the result shows that in the pretest, 90(100%) had inadequate knowledge and after the administration of lecture method 60(66.7%) had inadequate knowledge and 30(33.3%) had moderately adequate knowledge.

The above findings were supported by the work done by **Atangaetal (2015)** explored about the Criticisms of Lecture method in the teaching of nursing students through explorative descriptive method was used to elicit information and the result shows that majority of the nurse tutors aware of the fact that the lecture method has

been criticized a lot yet it is still in use, they recommend to use a mixed method of approach.

Fifth objective of this study is to compare the effect team based learning Versus Lecture method on level of engagement and learning preference of students in Group-IGroup-II.

Study results show that in the pretest, the 89 students (98.9%) in the Group-I and 90students (100%) in the Group-II had inadequate knowledge. The chi-square test cannot be computed which clearly infers that there was no difference in the level of knowledge between the two groups. Where as in the post test, the 87(96.7%) in the Group-I had adequate knowledge and 3(3.3%) had moderately adequate knowledge whereas in the Group-II, 60(66.7%) in the Group-II had inadequate knowledge and 30(33.3%) had moderately adequate knowledge.

The calculated chi-square value of 169.09 was found to be statistically significant at $p<0.001$ level which clearly infers that there was statistically significant difference in the level of knowledge between the two groups.

Regarding the level of engagement in the pretest, the 86 students (100%) in the Group-I and Group-II were less engaged. The chi-square test cannot be computed which clearly infers that there was no difference in the level of engagement between the two groups. Where as in the post test, the 86 students (95.56%) in the Group-I were highly engaged and 4 students (4.44%) in the Group-II were highly engaged and 90(100%) in the Group-II were inadequately engaged.

The calculated chi-square value of 180.0 was found to be statistically significant at $p<0.001$ level which clearly infers that there was statistically significant difference in the level of engagement between the two groups.

Regarding the learning preference, in the pretest, the 78students (86.67%) in the Group-I and 78students (86.7%) in the Group-II were less preferred and 12(13.33%) in the Group-I and 12(13.3%) in the Group-II were inadequate preferring.

The calculated chi-square value of 0.000 was not found to be statistically significant which clearly infers that there was no difference in the level of learning preference between the two groups.

Where as in the post test, the 86students (98.9%) in the Group-I were highly preferring and 1 student (1.1%) in the Group-II were adequately preferring and 73(81.1%) in the Group-II were less preferring and 17(18.9%) were inadequate preferring.

The calculated chi-square value of 180.0 was found to be statistically significant at $p<0.001$ level which clearly infers that there was statistically significant difference in the level of learning preference between the two groups.

Sixth objective of this study is to find out the relationship between the level of engagement and learning preference in community health nursing subject of Group-Iand Group-II.

In the present study the calculated Karl Pearson's Correlation value of "r" between knowledge and engagement is (0.379), knowledge and Learning preference is (0.394) and engagement and learning preference is (0.401) indicates positive correlation which was found to be statistically significant at $p<0.001$ level.

This clearly infers that Team Based Learning imparted to the Undergraduate nursing Students in the Group-I was found to be effective in enhancing their level of engagement and choice of preference which ultimately increases their level of knowledge upon community health nursing subjects.

Supported by the study findings of **Faezi S T etal (2018)** States that TBL increases learners participation and satisfaction lead to deeper learning, long term knowledge retention and better performance regarding practical knowledge.

Seventh objective of study is to associate the pre-interventional level of engagement and learning preference of students with their selected demographic variables.

The result depicts that the demographic variables doesn't have statistically significant association with pre intervention level of knowledge, engagement and learning preference upon community health nursing subjects among undergraduates nursing students of both Group-Iand Group-II at $p<0.05$ level.

Limitation of the study:

True Group-Istudy could not be conducted due to practical constraints.

CHAPTER-VI

SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

Summary of the Study:

The purpose of the study was to find out the effectiveness of Team Based Learning Versus Lecture method on community health nursing subject among under graduate nursing students. One group of students learned the Community Health nursing subject content through team based learning method and another group learned the same Community Health nursing subject content through lecture method. It was found through the statistical procedure that the team based learning has an effect on improving the students' level of engagement and learning preference.

Nursing Implications:

Nursing Practice

The researcher recommends the nurse educators to motivate nurses and nursing students by using TBL method in CNE to improve their clinical skills and cognitive abilities to ensure safe patient care.

Nursing Education:

This study demonstrated that TBL is an effective teaching strategy to enhance knowledge. More research on other specific learning outcomes of TBL for nursing students is recommended.

Nursing Administration

Team Based learning will significantly improves nursing student's clinical competence skills, communication competence, and self-leadership.

Nursing Research

Results indicate TBL is an acceptable and efficacious instructional strategy in undergraduate nursing students and in future research can be done to evaluate the impact of TBL via a randomized control trial.

RECOMMENDATIONS:

- A similar study can be replicated with different level of students.
- A meta-analysis could be done on the effectiveness of TBL Versus Lecture method.
- A comparative study could be done between TBL and other methods of teaching.

CONCLUSION:

The study was conducted to assess the effectiveness of TBL versus lecture method on community health nursing subject among UG nursing students. The findings revealed that TBL method is effective in improving the level of engagement and learning preference when compare to lecture method. It highlights the necessity of inclusion of novel methodology in teaching to arouse the learning interest of students.

REFERENCES

1. Dean.Parmelle,Larry K. Michaelsen,Sandy Cook &Patricia D. Hudes.. Team-based learning: A practical guide. Journal Medical Teacher 2012; 34(5).

2. Parmelee, D. X., &Michelsen, L. K. Twelve tips for doing effective team-based learning (TBL). Journal medical teacher 2010; 32(2).

3. Sisk, Rebecca J. 'Team-Based Learning: Systematic Research Review'. The Journal of Nursing Education 2011; 50(12).

4. Sand-Jecklin, K. The impact of active/cooperative instruction on beginning nursing student learning strategy preference. Nurse Education Today 2007; 27(5), 474-480.

5. Burgess AW, McGregor DM, Mellis CM. Applying established guidelines to team-based learning programs in medical schools: a systematic review. Academic medicine. 2014 Apr;89(4):678.

6. Mennenga,H.A., Smyer, T. A model for easily incorporating team based learning into nursing education. International Journal of Nursing Education Scholarship 2010; 7(4).

7. Faezi, seyedehtahereh, et al. The Effects of Team-Based Learning on Learning Outcomes in a Course of Rheumatology. Journal of Advances in Medical Education & Professionalism 2018; 6(1).

8. Sharma, Anita, et al. 'Understanding the Early Effects of Team-Based Learning on Student Accountability and Engagement Using a Three Session TBL Pilot'. Currents in Pharmacy Teaching & Learning 2017; 9(5). PubMed (accessed).

9. Chung, Eun-Kyung, et al. The Effect of Team-Based Learning in Medical Ethics Education. Medical Teacher 2009; 31(11). PubMed (accessed).

10. Vasan, Nagaswami S., et al. . Team-Based Learning in Anatomy: An Efficient, Effective, and Economical Strategy. Anatomical Sciences Education 2011; 4(6). Pub Med (accessed).

11. Frame, Tracy R., et al. Student Perceptions of Team-Based Learning vs Traditional Lecture-Based Learning. American Journal of Pharmaceutical Education 2015; 79(4).

12. Branney, Jonathan, and Jacqueline Priego-Hernández. A Mixed Methods Evaluation of Team-Based Learning for Applied Pathophysiology in Undergraduate Nursing Education. Nurse Education Today 2018; 61. PubMed, doi:10.1016/j.nedt.2017.11.014.

13. Noel MD, Daniels FM, Martins P .The Future of Lecture Method as a Teaching Strategy in Community Nursing Education. J Family Med Community Health.2015; 2(8): 1067.

14. Koohestani, Hamid Reza, NayerehBaghcheghi. The Effects of Team-Based Learning Techniques on Nursing Students' Perception of the Psycho-Social Climate of the Classroom. Medical Journal of the Islamic Republic of Iran. 2016; 30: 437.

15. Miller, Cynthia J. A Comparison of Traditional and Engaging Lecture Methods in a Large, Professional-Level Course. Advances in Physiology Education.2013; 37(4): 347-355 [Online]. Available at: doi:10.1152/advan.00050.2013. (Accessed).

16. Matheson, Catherine. The Educational Value and Effectiveness of Lectures.The Clinical Teacher, 2008; 5(4): 218-221.Available at: (Accessed: doi:10.1111/j.1743-498X.2008.00238.x.).

17. Li, Z., Cai, X., Zhou, K., Qin, J., Zhang, J., Yang, Q., & Yan, F. (2023). Effects of BOPPPS combined with TBL in surgical nursing for nursing undergraduates: a mixed-method study. BMC nursing, 22(1), 133. https://doi.org/10.1186/s12912-023-01281-1.

18. Murata, H., Asakawa, S., Kawamura, T., Yamauchi, H., Takahashi, O., &Henker, R. (2023). Efficacy of modified team-based learning in a flipped classroom for an acute-care nursing course: A mixed-methods study. Nursing open, 10(7), 4786–4796. https://doi.org/10.1002/nop2.1730.

19. Yang, S. Y., Liu, C., & Hsieh, P. L. (2022). Effects of Team-Based Learning on Students' Teamwork, Learning Attitude, and Health Care Competence for Older People in the Community to Achieve SDG-3. International journal of environmental research and public health, 19(11), 6632. https://doi.org/10.3390/ijerph19116632

20. Salminen L, Stolt M, Saarikoski M, Suikkala A, Vaartio H, Leino-Kilpi H. Future challenges for nursing education–A European perspective. Nurse education today. 2010 Apr 1;30(3):233-8.

APPENDIX

Workshop On Team Based Learning

SRI BALAJI VIDYAPEETH
UNIVERSITY

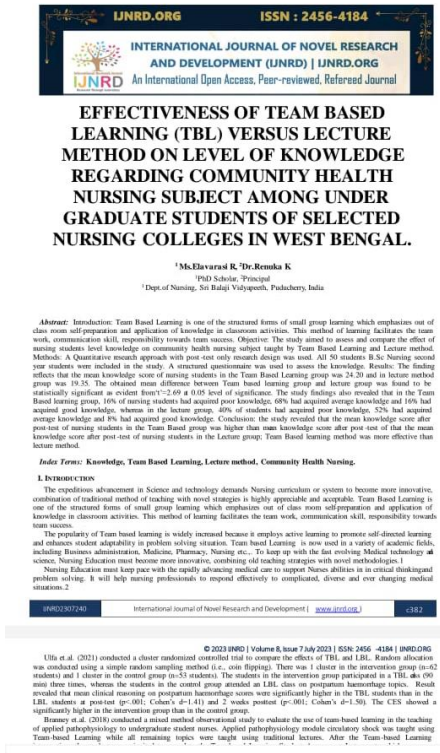
INTERNAL QUALITY ASSURANCE CELL

Certificate

This is to certify that
Ms ELAVARASI R
Has attended the workshop on
"Team Based Learning-An Innovative Teaching Method"
Organized by **Nursing Education Unit**
KASTURBA GANDHI NURSING COLLEGE
Held on 21.12. 2017

Chairperson, IQAC

Member Secretary
IQAC



IJNRD.ORG ISSN : 2456-4184

INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

EFFECTIVENESS OF TEAM BASED LEARNING (TBL) VERSUS LECTURE METHOD ON LEVEL OF KNOWLEDGE REGARDING COMMUNITY HEALTH NURSING SUBJECT AMONG UNDER GRADUATE STUDENTS OF SELECTED NURSING COLLEGES IN WEST BENGAL.

[1] Ms.Elavarasi R, [2]Dr.Renuka K
[1]PhD Scholar, [2]Principal
[1] Dept.of Nursing, Sri Balaji Vidyapeeth, Puducherry, India

Abstract: Introduction: Team Based Learning is one of the structured forms of small group learning which emphasises out of class room self-preparation and application of knowledge in classroom activities. This method of learning facilitates the team work, communication skill, responsibility towards team success. Objective: The study aimed to assess and compare the effect of nursing students level knowledge on community health nursing subject taught by Team Based Learning and Lecture method. Methods: A Quantitative research approach with post -test only research design was used. All 50 students B.Sc Nursing second year students were included in the study. A structured questionnaire was used to assess the knowledge. Results: The finding reflects that the mean knowledge score of nursing students in the Team Based Learning group was 24.20 and in lecture method group was 19.35. The obtained mean difference between Team based learning group and lecture group was found to be statistically significant as evident from't'=2.69 at 0.05 level of significance. The study findings also revealed that in the Team Based learning group, 16% of nursing students had acquired poor knowledge, 68% had acquired average knowledge and 16% had acquired good knowledge, whereas in the lecture group, 40% of students had acquired poor knowledge, 52% had acquired average knowledge and 8% had acquired good knowledge. Conclusion: the study revealed that the mean knowledge score after post-test of nursing students in the Team Based group was higher than mean knowledge score after post -test of that the mean knowledge score after post -test of nursing students in the Lecture group, Team Based learning method was more effective than lecture method.

Index Terms: **Knowledge, Team Based Learning, Lecture method, Community Health Nursing.**

I. INTRODUCTION

The expeditious advancement in Science and technology demands Nursing curriculum or system to become more innovative, combination of traditional method of teaching with novel strategies is highly appreciable and acceptable. Team Based Learning is one of the structured forms of small group learning which emphasises out of class room self-preparation and application of knowledge in classroom activities. This method of learning facilitates the team work, communication skill, responsibility towards team success.

The popularity of Team based learning is widely increased because it employs active learning to promote self-directed learning and enhances student adaptability in problem solving situation. Team based Learning is now used in a variety of academic fields, including Business administration, Medicine, Pharmacy, Nursing etc., To keep up with the fast evolving Medical technology and science, Nursing Education must become more innovative, combining old teaching strategies with novel methodologies.1

Nursing Education must keep pace with the rapidly advancing medical care to support Nurses abilities in in critical thinkingand problem solving. It will help nursing professionals to respond effectively to complicated, diverse and ever changing medical situations.2

© 2023 IJNRD | Volume 8, Issue 7 July 2023 | ISSN: 2456 -4184 | IJNRD.ORG

Ulfa et.al. (2021) conducted a cluster randomized controlled trial to compare the effects of TBL and LBL. Random allocation was conducted using a simple random sampling method (i.e., coin flipping). There was 1 cluster in the intervention group (n=62 students) and 1 cluster in the control group (n=53 students). The students in the intervention group participated in a TBL also (90 mins) three times, whereas the students in the control group attended an LBL class on postpartum haemorrhage topics. Result revealed that mean clinical reasoning on postpartum haemorrhage scores were significantly higher in the TBL students than in the LBL students at post-test ($p<.001$; Cohen's $d=1.41$) and 2 weeks posttest ($p<.001$; Cohen's $d=1.50$). The CES showed a significantly higher in the intervention group than in the control group.

Branney et al. (2018) conducted a mixed method observational study to evaluate the use of team-based learning in the teaching of applied pathophysiology to undergraduate student nurses. Applied pathophysiology module circulatory shock was taught using Team-based Learning while all remaining topics were taught using traditional lectures. After the Team-based Learning

ABSTRACT According to the recent survey of AmericanMedicalAssociation Council (AMAC) , now-a-daysthere is a highly ineffective teaching method is following in education system. Driven by this impact Dr.Larry Michelson founded a effective learning method in education called Team Based Learning. So we conducted this study to show the effectivenessof Team Based Learning(TBL) in studying GrowthandDevelopment[Toddler Stage] among third yearB.sc Nursing students.
MATERIALS AND METHODS: Quasi Experimental Study, Purposive Sampling Technique and one group pre test and post test design was adoptedon 90 third yearB.SC Nursing students.
RESULTS: IRAT - out of 90 samples 32 having inadequate,31 having moderate , 27 having adequate level of knowledge, whereasin TRAT – Everyone(90) samples werehaveadequateknowledge.

KEYWORDS : Individual Readiness Assurance Test, Team Readiness Assurance Test, Assess, Knowledge, Growth, Development, Toddler Stage.

INTRODUCTION

Several active learning methods have been investigated in the past decades. Team Based Learning is found to be an effective learning strategy among all, which is also accepted by various active learners. TBL was found by Dr. Larry Michelson on 1979, as a modernized learningtechnique.

The first reported implementation of TBL in health professional educationwasat the Baylor College of Medicine in 2001, aftervarious crisesand a systematic review protocol was registeredin 2011, within one year10 medicalinstitutions in united statespiloted TBL. Currently TBL is being used at the school of Medicine, Nursing, Dentistry, Pharmacy, Residency programs and continuing medical education in various jurisdiction including Japan, Korea, Singapore, and the Middle East.

There are 28 countries were following TBL with better learning outcome. In India is found to be using a least level of learning techniqueat the rate of 32-40%.

Similar study was conducted by Sowmiya Hosney 2019 with strong positive TRAT scoring, when comparing with IRAT and TRAT value with the use of IF-AT evaluationmethod. So we conductedthis study to show the effectivenessof TBL in using 90 third year B.Sc (Nursing) students.

MATERIALS AND METHOD:

A quasi experimental study was carried out in third year B.Sc (Nursing) in KGNC, Puducherry. Permission from the ethical committee wastakenprior to the study.

Inclusion criteriawerestudents of 3rd yearB.Sc (Nursing) KGNC, who are willing for TBL session. The information was collected which contain demographic data, (Age Gender and Medium of intuition studied).

TBL is conducted under 2 sessions as IRAT and TRAT. The interpretation is given basedon level of knowledge which is classified into inadequateknowledge (Below 50%), moderateknowledge (50% - 70%) and adequateknowledge(Above 70%).

RESULT:

The details of information filled by third yearB.Sc (Nursing) students, were entered in the Microsoft excel sheet and the percentage and distribution werecalculated.

Initially we conducted the IRAT test in that out of 90 students, only 32 (36%) students having inadequate knowledge aSSSnd 31 (35%) having moderate knowledge and 27 (30%) having adequate knowledgeon growth and developmenttoddler stage.

Afterthat we conductedTRAT session using IF-AT evaluationmethod in that out of 90 samples everyone (100%) having a adequate knowledge. After comparing the values of IRAT and TRAT. TRAT is found to be has more positive and effective scoring than IRAT. This shows that TBL is effective.

LEVELOF KNOWLEDGE	IRAT		TRAT	
	N	%	N	%
INADEQUATE	32	36	-	-
MODERATE	31	35	-	-
ADEQUATE	27	30	90	100

DISCUSION:

The study was conducted to show the effectivenessof TBL, the data was analyzed through both descriptive statistics (mean, frequency percentageand standard deviation) and inferentialstatistics (paired't' test and chi square).

In our study the mean knowledge score of IRAT was 37.77 with the standarddeviation of 12.01. Similarly the TRAT meanscorewas87.20 with the standard deviation of 23. The knowledge was statistically tested by wilcoxon signed test and found to be have highly statistically significant 'p' value of <0.001**

KNOWLEDGE	IRAT	TRAT
MEAN	37.77	87.20
SD	12.01	2.53
PAIRED 't' VALUE	13.1698	13.1698
p VALUE	<0.001**	<0.001**

Our study is in concordancewith the study done by Anselmus Aristo Parut (2019). In that study, he found that TBL is effective with the IRAT meanscoreof 92.6% whencomparedwith IRAT scoreof 64.9%. So we concludethat TBL is effectivelearningstrategy, whencompared with anyother learningmethod.

FUTURE PROSPECT OF THE STUDY:

There is a still debate going to show the TBL as effective learning strategy. Till now when compared with any other strategic method TBL is provedasan effectivestrategic method.

In future when this method got implemented will drives a positive learning outcome. This requires wide spread coverage of TBL technique all over the educational area by providing a effective learningstrategy to next generation.